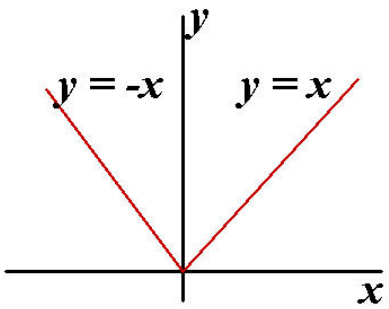
$$\lim_{x \to 1} \frac{2x^2|x-1|}{x-1}$$

Absolute Value

$$|x| = \begin{cases} x & \text{if } x \geq 0 \\ -x & \text{if } x < 0 \end{cases}$$

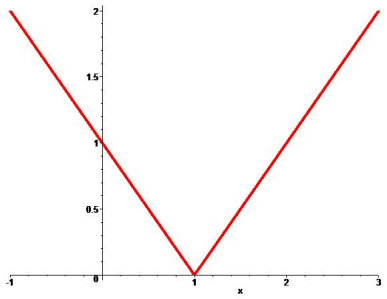


Absolute value of $x - 1$

$$|x-1| = \begin{cases} x-1 & \text{if } x-1 \geq 0 \\ -(x-1) & \text{if } x-1 < 0 \end{cases}$$

Absolute value of $x - 1$

$$|x-1| = \begin{cases} x-1 & \text{if } x \geq 1 \\ 1-x & \text{if } x < 1 \end{cases}$$

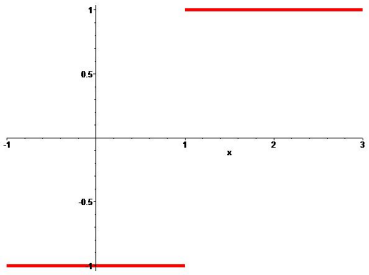


$$|x-1| = \begin{cases} x-1 & \text{if } x \geq 1 \\ 1-x & \text{if } x < 1 \end{cases}$$

$$\frac{|x-1|}{x-1} = \begin{cases} \frac{x-1}{x-1} & \text{if } x > 1 \\ \frac{1-x}{x-1} & \text{if } x < 1 \end{cases}$$

$$|x-1| = \begin{cases} x-1 & \text{if } x \geq 1 \\ 1-x & \text{if } x < 1 \end{cases}$$

$$\frac{|x-1|}{x-1} = \begin{cases} 1 & \text{if } x > 1 \\ -1 & \text{if } x < 1 \end{cases}$$



$$\frac{|x-1|}{x-1} = \begin{cases} 1 & \text{if } x > 1 \\ -1 & \text{if } x < 1 \end{cases}$$

$$\frac{2x^2|x-1|}{x-1} = \begin{cases} 2x^2 & \text{if } x > 1 \\ -2x^2 & \text{if } x < 1 \end{cases}$$